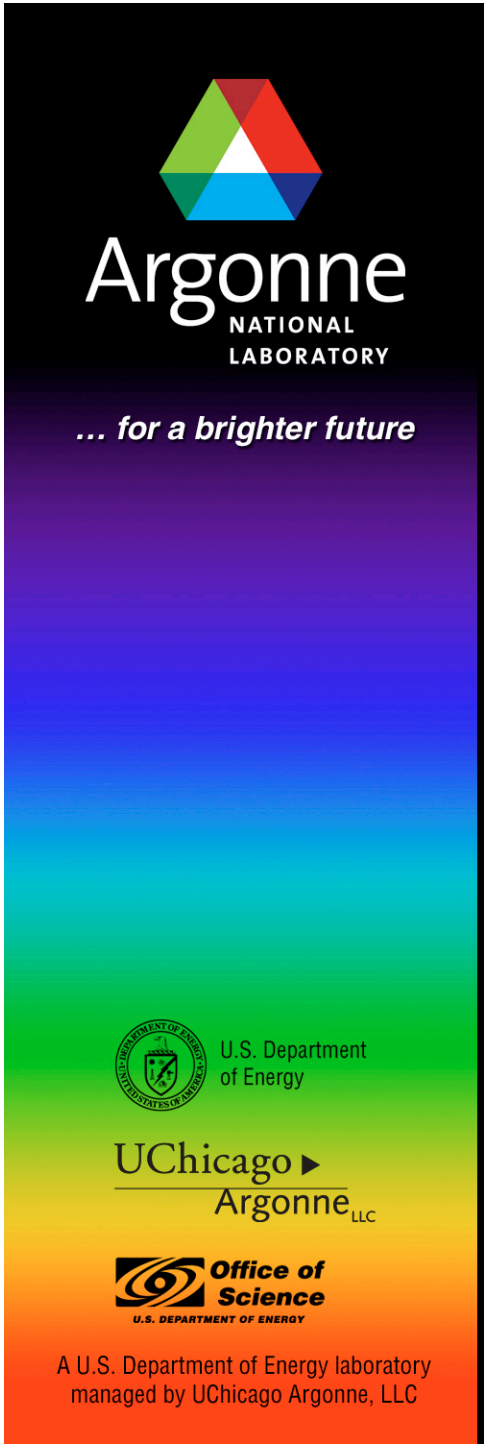

The APS Beam Time Request, Allocation, Safety, and Scheduling System

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Background

- At the end of every fiscal year, the APS requests usage statistics from each beamline for DOE (so-called Astheimer Report).

Values from main questionaire:
Number of hours that the facility scheduled beam for users: 4588
Number of hours that the facility delivered beam to users: 4478.8
Number of beamlines * availble to users at the end of Fical Year: 58

*The number of experiments that can receive beam simultaneous defines a facility's total number of beamlines.

A	B	C	D	E	F
Beamline ID	Beamline Name	% of FY beamline was usable	# of hours SCHEDULED on beamline	# of hours delivered to beamline	# of hours that researchers used the delivered time
1-BM*	XOR	87.5%	4016	4478.8	4016
1-ID	XOR	99.9%	4584	4478.8	4584
2-BM-B	XOR	100.0%	4588	4478.8	4588
2-ID-B*	XOR	35.6%	1632	4478.8	1632
2-ID-D*	XOR	67.7%	3104	4478.8	3104
2-ID-E*	XOR	70.3%	3224	4478.8	3224
3-ID-B,C,D	XOR	99.9%	4584	4478.8	4584
4-ID-C	XOR	99.7%	4576	4478.8	4576
4-ID-D	XOR	99.9%	4584	4478.8	4584
5-BM-C	DND-CAT	99.9%	4584	4478.8	4584
5-BM-D	DND-CAT	99.9%	4584	4478.8	4584
5-ID-B,C,D	DND-CAT	99.9%	4584	4478.8	4584
6-ID-B,C	MU-CAT	99.9%	4584	4478.8	4584
6-ID-D*	MU-CAT	91.5%	4200	4478.8	4200

- The old process is cumbersome since each beamline/sector records the data in different ways and it was difficult for us (and the beamline administrators) to meet the DOE reporting requirements which state that all beam time used be connected to individual experiments, users, and institutions.

A Common (Centralized) Beam Time Request System

- Several years ago, the APS took on the task of developing a centralized beamtime scheduling and request system to:
  - Provide a uniform platform for scheduling activities that would capture utilization and other data types for management reports.

- We understood that there would be some “pain” involved with a transition form a “custom, home-built” system to a centralized one and so an Advisory Committee was assembled to provide guidance to the APS programmers on the features that should be included.

  Malcolm Capel (NE CAT)
  Steve Ginell (SBC CAT)
  Keith Brister (LS CAT)
  Paul Zschack (XOR)
  Carlo Segre (MR CAT)
  Kanagalaghatta Rajashankar (NE CAT)
  Francesco DeCarlo (XOR)
  Pete Jemian (BCDA)
  Jonathan Lang (XOR)
  Mark Rivers (GSE CARS)
  Brian Toby (XOR)

- Earlier versions of this system have also been reviewed by the GUP Advisory Committee, presented to the Life Sciences Council, and demoed to beamline administrators.

APS Beam Time Request, Allocation, Safety, and Scheduling System

- After a lot of work, we are about ready to release a beta-version of the APS Beam Time Request, Allocation, Safety, and Scheduling System.
  - The Beam Time Request System tracks all beam time usage and associated each usage with:
    - *Type (prop/non-prop, GU/CAT/CDT, rapid access, etc.*
    - *A proposal*
    - *A beam time request (BTR) and*
    - *Experiment Safety Assessment Form (ESAF)*
  - The system enables APS and beamline managers to collect and document beam time usage and will be used to report usage date to the DOE (Astheimer reports).

- ***Proposed Policy:***
  - ***All beam time at the APS shall be requested through the APS Beam Time Request System.***

Implementation Timeline

April 30, 2009	Sponsor identified
May 11, 2009	Coding on Pilot release begins
May 11, 2009	Initial server up and running.
May 31, 2009	Sponsor committee meets
September 29, 2009	Coding ends on Pilot release
September 30, 2009	Coding begins on Full release
October 1, 2009	**First eight sectors begin pilot usage. These sectors no longer send spreadsheets to AES**
October 1, 2009	Work begins on communications. Announcements of the system are made at appropriate meetings.
October 15, 2009	First meetings held with pilot group personnel.
November 1, 2009	DMZ server put into operation.
January 10, 2010	**Coding ends on full release. System rolled out to all sectors. Sector personnel halt spreadsheet utilization.**

A Few Examples of Things We Are Still Grappling With

- No Scheduling (aka-ESAF only) – some MC beamlines accept many ad-hoc experiments and do virtually no advanced scheduling. These beamlines request that users just fill out an ESAF.
  - This is complex to implement as it requires we extract accurate schedules from the data on the ESAFs. We propose a standard process from users that requires a proposal, beamtime request, and then ESAF, i.e. require that ESAFs only be created via "copy GU proposal into ESAF" function and require that beamline admins schedule beamtime requests.

- Several beamlines requested that groups are allowed access to the scheduling system with group logins.
  - ANL cybersecurity does not allow group passwords/logins. We propose that to start we do not allow group logins and look into a federated authentication project at a later date.

- In short, to get this system moving forward, we would like to require a consistent process that follows the format:

  Proposal ➔ Beamtime Request ➔ Schedule ➔ ESAF ➔ Experiment

The Future

- We will attempt to refine the system to add the features that make it easier and more useful to all involved, but BE PATIENT…….

Questions????